DOCUMENT RESUME

ED 414 995 PS 025 349

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TITLE Evaluation of an In-Service Model To Train Child Care Providers about Inclusion.

SPONS AGENCY Office of Special Education and Rehabilitation Services (ED), Washington, DC. Clearinghouse on the Handicapped.

PUB DATE 1997-04-00

NOTE 32p.

CONTRACT H024P90020

PUB TYPE Reports - Evaluative (142)

EDRS PRICE MF01/PC02 Plus Postage.

DESCRIPTORS Caregiver Role; Cognitive Development; Developmental Disabilities; *Disabilities; Inservice Teacher Education; *Mainstreaming; Physical Development; Preschool Children; Preschool Education; *Preschool Teachers; Professional Training; Social Development; *Special Education; Special Education Teachers; Training Methods

IDENTIFIERS *Caregiver Behavior; Caregiver Evaluation; *Caregiver Training; Communication Behavior; Developmental Students

ABSTRACT

This study examines the effects of in-service education on caring for preschool children with disabilities. Caregiving behaviors and self-perceptions of caregivers who did or did not receive training were evaluated. A 2-year, pretest/posttest, experimental-control group design was used to compare the effects of live and videotaped training conditions and no-training conditions. No significant difference was found in the performance of the two groups between year one, when there was live training, and year two, when they received videotaped training. There was no difference between the groups in caregiving behaviors that would promote physical development, but there was significant difference in caregiving behavior for promoting communication development, cognitive development, social/emotional development, and literacy. Compared to those who received no training, caregivers who received either live or videotaped training were more confident about their knowledge and abilities when the training project was over. In general, this study found that training resulted in significant changes in caregiving behaviors and self-ratings regardless of whether caregivers had live or videotaped training, by either a multidisciplinary team of experienced professionals or by graduate students. Results suggest that a single professional can be as effective as a multidisciplinary professional team when training combines multimedia presentations with on-site visits. (Contains 30 references.) (AS)

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ED 414 995

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Evaluation of an In-Service Model to Train Child Care Providers About Inclusion

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Author Note

This study was supported by a grant from the US Department of Education, Office of Special Education and Rehabilitative Services (HO24P90020). The authors would like to thank Marilyn Coleman, Sherry Folsom-Meek, Stevie Hoffman, Glenda Kelly, and Patrick Schloss for their assistance in creating workshop presentations, on-site demonstrations, and videotapes. We would also like to thank the faculty, staff, and children who were affiliated with the forty child care agencies that participated in the study.

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Abstract

This article reports the results of an in-service education project about caring for children with disabilities. Employees of home-and center-based child care programs were randomly assigned to training and control groups. Caregivers who received training attended group meetings and observed on-site demonstrations under live and videotaped presentation conditions. During the first year, a multidisciplinary team consisting of eight professionals presented monthly workshops and conducted on-site consultation and demonstration visits at the child care settings. During the second year, one professional presented videotapes and led discussions during group meetings, and a graduate student assistant conducted the on-site consultation and demonstration visits. Two control groups of caregivers did not receive any training. Caregivers who participated in the training groups earned significantly higher scores on an observation scale and on a self-rating questionnaire than caregivers who were assigned to the control groups. There were no significant differences between the two training conditions; the video presentations were as effective as the live presentations. This study supports the use of a relatively inexpensive and time efficient approach to in-service education about mainstreaming children with disabilities into child care environments.

Evaluation of an In-service Model to Train Child Care Providers About Inclusion

With increasing frequency, children with disabilities are being enrolled in child care facilities that historically have served only typically-achieving children. This practice, known as mainstreaming, or inclusion (Odom & McEvoy, 1990), is an important trend in the education and care of preschool-age children with disabilities (McWilliam & Bailey, 1994). For example, Klein and Sheehan (1987) found that 40% of preschoolers with handicapping conditions in New Mexico who attended early intervention programs also received an average of 26 hours of child care services per week. Additionally, in a recent survey of licensed providers residing in Boone County, Missouri (Busch, Gillam, & Patterson, 1990), of the 146 licensed child care providers in Boone County Missouri, only 18% indicated they had received any formal training to work with children with disabilities. However, 33% indicated that they currently served children with disabilities and an additional 30% suspected that one or more children in their care who had not been identified as handicapped were, in fact, handicapped. If this sample of child care providers is generally representative of the overall population of caregivers (and we have no reason to suspect that they are not), then many at-risk children and children with disabilities attend child care environments that are staffed by child care providers who may not know how to meet their special needs. Furthermore, there are currently no state standards that require child care providers to receive any formal training that would prepare them to provide inclusive education (Morgan, Azer, Costley, Genser, Goodman, Lembardi, & McGinsey, 1993).

Most professionals in early childhood special education recommend that young children with disabilities receive services in inclusive settings (Wolery & Wilbers, 1994). Wolery and Wilbers (1994) have argued that all early childhood personnel are obligated to be knowledgeable about the needs of children with disabilities, understand how to identify

and refer children who might be in need of special services, and be able to implement instructional practices that promote successful inclusion. They also point out that one of the greatest barriers to preschool inclusion is the lack of adequate preparation and training of general early childhood educators.

There is no question that mainstreaming can be beneficial for preschool-age children with disabilities. Children with disabilities are socially active to a greater extent and engage in positive interactions with peers more frequently when they are enrolled in mainstreaming programs (Beckman & Kohl, 1987; Strain, 1984). Children with disabilities who are mainstreamed also engage in higher-level play (Fenrick, Pearson, & Pepelnjak, 1984) and more positive social interaction (Guralnick & Groom, 1988) than children with disabilities who are not mainstreamed. While mainstreaming appears to have a major impact on the social skills of young children with special need, typically developing children conversely do not seem to learn inappropriate behavior as a result of being in an inclusive setting (Wolery, Strain & Bailey, 1992).

If mainstreaming a child is to be maximally effective for all children, it needs to be implemented appropriately. Simply placing preschoolers with and without disabilities together in the same child care environment may have minimal effects on the development of fine motor, language, and preacademic skills (Jenkins, Odom, & Speltz, 1989; Odom & McEvoy, 1990). For example, in a study of interactions between children with and without disabilities in an integrated preschool, Beckman (1983) found that there were fewer interactions between disabled and nondisabled children when caregivers had not directly promoted integration.

Jenkins, Speltz, and Odom (1985) evaluated the effects of a "proximity model" of mainstreaming in which neither teachers nor nondisabled children were instructed to facilitate integration. They studied 36 children with mild disabilities who attended either segregated or integrated preschool classrooms. End-of-year testing revealed no differences between children in integrated and segregated settings on measures of cognitive,

preacademic, language, and fine motor skills. These authors concluded that, if accelerated development is a goal of mainstreaming, curricula that serves to facilitate positive interactions between children with and without disabilities is needed. The potential benefits of mainstreaming are most likely to occur when positive interactions between children with disabilities, their caregivers, and their peers are actively promoted by knowledgeable child care providers (Beckman, 1983; Jenkins, Odom, & Speltz, 1989; Odom & McEvoy, 1990; Peck, Odom, & Bricker, 1993).

Clearly, staff development is an important factor in effective mainstreaming (Wang, Vaughan, & Dytman, 1985). For integration to be successful, child care providers need to have current information about ways to promote the inclusion of children with special needs into their care environments (Wang & Gennari, 1983). Successful integration of children with and without disabilities requires intensive staff development, including carefully planned procedures for facilitating the development of social and language behavior (Kline & Sheehan, 1987; Kontos & File, 1993). The major components of an effective staff development program identified by Klein and Sheehan (1987) are: "(a) individual staff development rather than large group presentation, (b) active involvement in programs as opposed to passive listening, (c) demonstration of strategies and skills on-site with immediate feedback from a supervisor, and (d) a planned, integrated staff development program rather than isolated and unrelated training sessions" (p19). These features of: opportunities to apply knowledge, a continuous program of study, individualized delivery, and expert mentoring, have been cited by others as resulting in desirable changes in participants' behaviors that are maintained over time (Epstein, 1993; Venn & Wolery, 1992).

The authors followed many of the suggestions of Klein and Sheehan (1987) in creating and presenting an in-service training program to home-based and center-based child care providers. Our primary goal was to enhance the child care providers' ability to modify and adapt the activities they were already doing in a manner that would facilitate the

inclusion of children with disabilities. A multidisciplinary team of consultants combined traditional lecture and discussion sessions with experimental techniques such as practice under simulated conditions, structured feedback, and on-the-job coaching. Thus, like Klein and Sheehan (1987), and as recommended by Epstein (1993), the curriculum for this in-service project included an on-site needs assessment, demonstration, and consultation component in conjunction with a group meeting component.

A formal investigation was carried out to study the effects on in-service education about caring for children with disabilities. To determine whether the in-service was effective, we evaluated caregiving behaviors and self-perceptions of caregivers who did and did not receive training. We also wanted to know whether outcomes differed for caregivers who received training under live or videotaped conditions. Videotaped training is much more economical, and can be implemented by a single trainer. If this approach was as successful as live training, it would be useful in many areas of the United States where there is limited access to multidisciplinary teams of experts who are knowledgeable about caring and educating children with disabilities.

A two-year, pretest/posttest, experimental-control group design (Campbell & Stanley, 1963) was used to compare the effects of live and videotaped training conditions and no-training conditions. The primary research questions were: (1) What effect does in-service education about mainstreaming have on child care providers' interactions with children? (2) What effect does in-service education about mainstreaming have on child care providers' self-assessment of their knowledge and abilities? (3) Do self-reports of knowledge and/or observed interaction with children differ as a function of participation in the live or videotaped presentation conditions?

Method

Participants

Forty child care providers who were employed in private child care agencies participated in this two-year project. A forced choice questionnaire survey was mailed to

146 licensed child care programs in Boone County, Missouri. The survey requested information in three areas: the formal training of the child care personnel to work with preschool aged children with disabilities, the presence or acceptance of children with disabilities in the child care program, and the willingness of staff personnel to be involved in a staff development in-service training program. Personnel from eighty-two (82) child care programs responded yielding a response rate of 57%. Twenty-seven (27) individuals expressed an interest in the training. Follow-up telephone calls and personal on-site visits were made to all prospective candidates to confirm their intent, to determine their eligibility status (seven caregivers did not meet eligibility requirements to participate in this study), and to obtain a letter of agreement. From this pool, individuals were first sorted into family day care/ child care center groups and then randomly assigned to experimental and control groups. Each treatment group (experimental/control) contained five family child care providers and five child care center providers.

During the first year, 10 participants were assigned to a live presentation (LP) training group, and 10 participants were assigned to a no-presentation control group (LP controls). The recruitment and assignment procedures were repeated for year 2. Again, the local Resource and Referral Agency provided a list of licensed child care providers in the area. Programs and individuals who were previously trained were not eligible. During the second year, 10 new participants were assigned to a videotaped presentation (VP) training group, and 10 other participants were assigned to a no-presentation control group (VP controls). None of the 40 participants had received previous training that concerned caring for children with disabilities. As participation in this training program satisfied the state requirement for in-service training, none of the participants in this study received additional training during this time. All of the participants were female; thirty-nine (98%) were caucasian; one was black. For year 1 and year 2, all participants had received a high school diploma; five of the participants (three in year 1 and two in year 2) had received some college coursework, but none had completed a college degree. The size of the participants'

facilities varied between six and 80 children. Most of the facilities served one or two children who had mild or moderate disabilities who are enrolled full time and attended daily. All the participants indicated their willingness to accept children with disabilities into their care. It was not possible to equate the groups on facility size or the number or type of children with disabilities who were enrolled.

Training

A multidisciplinary collaborative curriculum was developed to educate child care providers about the special needs of preschoolers with disabilities and about ways to integrate these children into their care settings. The training program combined classroom instruction with on-site consultation and demonstration

During the first year of the investigation, members of the live presentation group attended eight, 90-minute group meetings which were held once each month. Each meeting concerned a different topic (Table 1) and was conducted by a professional who had practical and research experience in that area. Seven of the presenters were university professors from the departments of curriculum and instruction, special education, speech pathology, human environmental studies, and physical education; one presenter was a public health nurse.

Prior to every group meeting, the in-service presenter visited the participating child care providers at their child care facilities to determine what they wanted to know about the presentation topic. Presenters prepared lectures that addressed as many of the participants' needs and concerns as possible. During the group meeting, presenters provided information about the month's topic and demonstrated two or three activities that were designed to foster interactions between children with and without disabilities. In addition to providing an efficient means for disseminating information to participants, these meetings provided a forum for participants and staff to share concerns, to problem-solve, and to support each other's efforts. A summary of the content of each group meeting is presented in Appendix 1.

After every group meeting, the inservice presenter conducted an individualized on-site demonstration session at each participant's child care facility. During these visits, the presenter consulted with child care providers about any questions or concerns they still had about the children in their care and demonstrated the caregiving strategies or activities that were discussed at the meeting. These follow-up sessions occurred within 1 1/2 weeks of the group presentation and usually lasted about 1-2 hours. Children with disabilities were always included in the demonstration sessions. In this way, each child care provider saw how to modify and/or adapt activities that were discussed in the group meeting to the specific needs of the children they cared for.

Shortly after their workshop presentations, the presenters wrote videotape scripts that included the important content of their lectures. Film crews were sent to home- and center-based child care facilities that served children with and without disabilities to videotape scenes that corresponded to the text of the presentations. The scripts were narrated by a professional actress and the scenes were edited into a series of 20- to 30-minute videotapes (Busch, Patterson, & Gillam, 1992).

During the second year of the project, 20 new volunteers were selected to participate in the study. Ten participants were assigned to a videotape training group, and 10 participants were assigned to a no-training control group. Like year one, participants who received training attended eight monthly workshops that were followed by on-site demonstrations. There were no differences between the year one and year two control conditions. There were three primary differences between the year one and year two training conditions: (1) the eight videotapes that had been filmed, narrated, and edited during the first year were used as the primary means for presenting information during the year two workshops; (2) the eight in-service meetings were conducted by a single facilitator (the fourth author); and (3) all on-site visits were conducted by a graduate assistant.

Measures

Two criterion-referenced scales were used to assess the outcomes of training. Honig and Lally's (1973) fixed criteria scale, Assessing Behaviors of Caregivers-III, was adapted to provide a record of specific caregiver behaviors within the categories of promoting communication development, promoting cognition/play, promoting social/emotional development, promoting physical development, managing behavior (proactive and reactive management strategies), and promoting literacy. Items on the adapted scale consisted of behaviors that were discussed and demonstrated in the in-service training workshops and the on-site visits (Appendix 2).

Like Honig and Lally (1973), we used a time sampling technique to record caregiver behaviors that were observed within two-minute fixed intervals within 24 minute observations. Observers sat in a corner of the child care facility and recorded caregiver behaviors in columns on the protocol form. An audible beep on a two-minute timing tape alerted observers when to move to the next column of the scale. Longer intervals were necessary due to the number of behaviors that were to be observed. A total of 80 observations were completed throughout the study, two observations per caregiver. The first observation was completed prior to the training program and the second observation occurred within one month of the completion of the program.

To evaluate participants' perceptions of their knowledge, child care providers in the training and control groups completed a self-rating questionnaire before and after the treatment phase of the study. Participants rated the extent of their knowledge of 34 items that concerned basic knowledge of preschoolers with disabilities; parents and families of children with disabilities; promoting cognitive, communication, literacy, and motor development in mainstreamed settings; managing behavior of children with and without disabilities; and special health care and nutritional needs of preschoolers with disabilities.

Like the observation checklist, all items on the questionnaire concerned information that was presented in the training workshops and the on-site visits. Participants used a four-point Likert scale to indicate their level of knowledge about each item. The choices were: I knew very little about this item and therefore need basic instruction (Level 1); I need additional assistance in order to apply my knowledge about this item to the children in my care (Level 2); I am independently competent and could apply my knowledge about this item to the children in my care (Level 3); or I have mastery level knowledge about this item and could act as a resource to others about this topic (Level 4). This self-rating questionnaire was a criterion-referenced scale designed to reveal information about specific topics that were included in the curriculum. The subject pool was too small to adequately evaluate the internal consistency of this instrument.

Six graduate students were trained to observe caregiver-child interactions. Following five hours of observation training, the observers independently scored two, 24-minute videotaped samples of actual caregiver-child interactions. Point-to-point inter-rater reliability coefficients for each cell in the observation (0 = not observed, 1=observed) ranged from 86% to 94% across the two samples, with a mean of 90% agreement. All observers were required to achieve inter-rater reliability before they could perform the field observations. During the study, inter-rater reliability was assessed by assigning two observers to independently rate caregiver behaviors during 24 (30%) of the 80 observations that were conducted. Reliability observations were evenly spaced across pretraining and posttraining periods. The mean percent of point-to-point agreement between the independent raters was 94.8% with a range of 88.4% to 99.76%.

Results

One goal of this study was to determine whether training resulted in changes to specific caregiving behaviors. An observation checklist (Appendix 2) was used to quantify pretraining and posttraining caregiver behaviors. The value of interest was the total number of 2-minute segments during which a type of care giving behavior was observed. The

dependent variables were the total number of segments observed within the categories of promoting cognitive development, promoting social/emotional development, promoting physical development, proactive vs. reactive behavior management, and promoting literacy development.

A three-way repeated measures MANOVA with Group (training vs. control) and Year (1: live, 2: videotape) as the between factors and Time of testing (pretraining vs. posttraining) as the within factor was used to analyze the observation data according to Wilks' lambda calculations (Gagnon, Haycock, Rothk, Feldman, & Finzer, 1993). Significant Group F (1,35) = 12.325, $p < .01$ and Time of testing F (1,35) = 35.86, $p < .001$ main effects were subsumed by a significant Group x Time of testing interaction [F (1,35) = 14.91, $p < .001$]. Examination of Figure 1 indicates that the control and training groups were similar at pretest. At posttest, there is an increase in the number of observed behaviors for the training group only. The year main effect was not significant, indicating that the performance of the two control and training groups did not vary reliably between year 1, when live training was provided, and year 2, when videotaped training was provided.

Follow-up, two-way, repeated ANOVA's were computed to assess group performance for the observation categories of promoting communication development, promoting cognition/play, promoting social/emotional development, promoting physical development, and promoting literacy. The between factor for each ANOVA was group (training vs. control). The within factor was time of testing (pretraining vs. posttraining). Mean number of observations for the five dependent measures are presented in Table 2.

The training and control groups did not differ for caregiver behaviors which could promote physical development. However, there were significant group main effects favoring the training groups for promoting communication development $F(1,37) = 9.38$, $p < .01$, promoting cognitive development $F(1,37) = 15.0$, $p < .01$, promoting social/emotional development $F(1,37) = 5.07$, $p < .05$, and promoting literacy $F(1,37) =$

4.48, $p < .05$. Significant Group x Time interactions for promoting communication development $F(1,37) = 16.07$, $p < .001$, promoting cognition/play $F(1,37) = 9.84$, $p < .01$, promoting social/emotional development $F(1,37) = 5.09$, $p < .05$, and promoting literacy development $F(1,37) = 8.59$, $p < .01$ all indicate that posttraining performance significantly exceeded pretraining performance for the training groups only.

Training workshops and on-site demonstrations on the topic of behavior management emphasized the relative superiority of proactive management of behavior (e.g., establishing rules and consequences that motivate socially appropriate behavior, suggesting alternative behaviors, using behavior rehearsal and modeling) over reactive management of behavior (e.g., ignoring disruptive behaviors, restraining or scolding children for socially inappropriate behavior). A three-way repeated measures ANOVA was computed to assess caregiver behavior management strategies. The between factor was Group (training vs. control). The within factors were Type of management (proactive vs. reactive) and Time of data collection (pretraining vs. posttraining). While this analysis yielded no significant group differences, the Type of management x Group interaction $F(1,37) = 3.31$, $p = .076$ revealed a trend toward greater use of proactive behavior management actions and less use of reactive behavior management actions by caregivers who received training. This trend was not evidenced by caregivers who did not receive training.

The second goal of this study was to determine whether participation in the training resulted in a reliable change in caregivers' perceptions of their knowledge and abilities. A self-rating scale was administered to determined whether participants in the four groups believed they knew more about developmental disabilities and caring for children with disabilities at the end of training than they knew before training began. Table 3 presents distributions of the percent of responses within the four categories of the self-rating scale.

Analysis of a three dimensional contingency table (Wickens, 1989) was significant across groups, Time of test, and levels, X^2 (21, $N = 160$) = 213.12 $p < .0001$. Response

patterns for the live and videotape training groups changed significantly from pretest to posttest administrations of the scale (live presentation group, $X^2(3, N = 40) = 124.29$, $p < .0001$; videotape presentation group $X^2(3, N = 40 = 81.23$, $p < .0001$). Response patterns for the two control groups did not differ significantly across pretraining and posttraining administrations. Clearly, caregivers assigned to the training groups left the project with a high level of confidence in their knowledge and abilities regardless of whether they had participated in the live or videotaped conditions.

Discussion

There is a great demand for child care outside the home, including the demand for child care for children with disabilities. Successful integration of children with disabilities into mainstreamed child care settings requires some degree of caregiver knowledge (Brophy & Hancock, 1985). Many individuals who work in daycare and preschool facilities that accept children with disabilities have not been trained to meet these children's special needs. In this study, an interdisciplinary in-service training program that was consistent with many of the recommendations of Klein & Sheehan (1987) was implemented to train child care providers to meet the child care and developmental needs of preschool children with disabilities. Professionals from the fields of special education, speech-language pathology, human development and family studies, curriculum and instruction, kinesiology, and nursing created workshop presentations and on-site demonstrations that concerned such issues as the nature of developmental disabilities, stresses in families that include children with developmental disabilities, ways to promote communication, cognitive, physical, social/emotional, and literacy development in mainstreamed settings, and health and nutrition needs of children with developmental disabilities.

A study was designed to evaluate the effects of the in-service training. In two training conditions, caregivers attended monthly group meetings that consisted of a

presentation on a particular topic related to mainstreaming, group discussion, and demonstrations of ways to facilitate development of children with and without disabilities. Monthly group meetings were followed by on-site demonstration and consultation visits to each participant's child care facility. During the first year of the project, caregivers were assigned to a no-training control condition or a relatively expensive and time-intensive live training condition in which eight professionals provided individual instruction and made on-site visits to child care providers. Training and control groups were also studied during the second year of the project. However, during the second year, a less expensive and less time-intensive approach to training was used in which one professional presented videotapes and led group discussions, and a trained graduate student performed the on-site demonstrations.

The results of this study demonstrate the positive effects of the two training conditions. Child care providers in the two training groups altered key caregiving behaviors that were related to promoting communicative, cognitive, socio-emotional, and literacy development. These changes were not evidenced by child care providers in the two control groups. Additionally, only those child care providers who received live or videotaped training exhibited a high level of confidence in their knowledge about and ability to care for children with disabilities at the end of the training periods. Our results suggest that observed behaviors of interactions with children and self-reports of knowledge did not differ as a function of receiving live or videotaped training. Consistent with the findings of other studies (i.e., Wood & Thompson, 1980), the mode that information is presented was not critically important for educational outcomes.

The success of this training program most likely can be attributed to the attention that was given to specific practices for affecting staff learning and skill development. Wolfe (1994), who spent 15 years conducting research on best practices in in-service education, identified five key components to successful training: (1) useful

handouts/materials, (2) relevant content that addressed an existing need, (3) follow-up support, (4) practical content that can be applied immediately, and (5) effective trainers.

Following Klein and Sheehan (1987), the workshop presenters visited participating child care programs to consult with child care providers about their needs and concerns before creating their presentations. Doing so focused the presenters on the practical needs of the project participants, and increased the likelihood that the content of the workshops would be directly useful to individuals who care for children with and without disabilities.

In this project, it did not matter whether the primary content of the workshops was presented in live lecture or videotape format. In all likelihood, what did matter was that the participants in the training groups had an opportunity to come together each month to learn about and discuss a particular topic, to share practical concerns with each other, and to practice caregiving strategies with each other. Caregivers reported to us that the sense of community that was so engendered during the monthly group meetings was an important part of their training experience.

We also followed each workshop with a visit to the participant's child care program. During these visits, the workshop presenters or a trained graduate student demonstrated activities with the children in each care environment, answered questions after caregivers had time to think about the information that was presented in the workshops, and consulted with caregivers about the specific needs of the children in their care. It did not seem to matter whether the visitor was a member of the project faculty or a trained graduate student. What was important was that a representative of the project made an effort to make the content of the group workshops relevant to the specific needs of each caregiver. By going to their child care facilities, we were demonstrating our commitment to their individual needs.

Future research focused on the relative merits of each training component (presentation/on-site follow-up), would further our understanding of time and cost efficient methods of in-service education. The need for additional professional development for

child care providers around the issues of inclusion is unquestionable; the challenge is finding the resources, designing effective approaches, and maintaining desirable changes. Alternative methods of in-service delivery need to be developed and researched for a profession that is typically young, not well educated and prone to a high turn-over (Cost, Quality, and Child Outcomes Study, 1995).

In summary, the benefits of inclusion have been demonstrated for preschool-age children with disabilities, especially when caregivers have been trained to facilitate integration between children with and without disabilities. In this study, training resulted in significant changes in caregiving behaviors and self-ratings whether caregivers attended live presentations and received on-site demonstrations by a multidisciplinary team of experienced professionals or viewed videotaped presentations and received monthly demonstrations by a graduate student. This represents a time-efficient and inexpensive method for providing in-service education about mainstreaming children with disabilities into child care environments. It appears that a single professional can be as effective as an entire multidisciplinary team of presenters when multimedia presentations are combined with on-site visits. This approach should be especially well-suited in the early childhood profession where staff development funds are frequently limited, and in many areas of the United States where there is limited access to multidisciplinary teams of experts who are knowledgeable about caring and educating children with disabilities.

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Table 1.

Topics of the Group Meetings and the Corresponding Videotapes

1. Children who are at risk for or evidence developmental disabilities
2. Family relationships and unique issues confronting families containing children who are at-risk for or evidence developmental disabilities
3. Language development and ways to establish a language learning environment that facilitates communication
4. Cognitive development and play-based strategies for promoting cognitive development
5. Behavior management and strategies for facilitating affective and social development
6. Psychomotor development and techniques for facilitating motor skills
7. Literacy development and strategies for facilitating early reading and writing
8. Health care and nutritional needs of children with special needs

Table 2.

Mean number of two-minute periods in which specified caregiver behaviors occurred during pre- and posttraining observations using the Observation of Caregiver Behavior Scale.

	Time of Observation	
Type of Behavior	Pretraining	Posttraining
Promoting Communication Dev.		
Training Group	27.4	40.1
Control Group	26.3	26.8
Promoting Cognitive Development		
Training Group	6.35	13.5
Control Group	5.1	4.4
Promoting Social/Emotional Dev.		
Training Group	15.5	25.1
Control Group	15.2	16.8
Promoting Physical Development		
Training Group	11.1	14.5
Control Group	8.4	15.5
Promoting Literacy Development		
Training Group	4.7	11.3
Control Group	5.4	3.3

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Table 3.

Mean Percent of Pretest and Posttest Responses at the Four Levels of the Self-Rating Scale

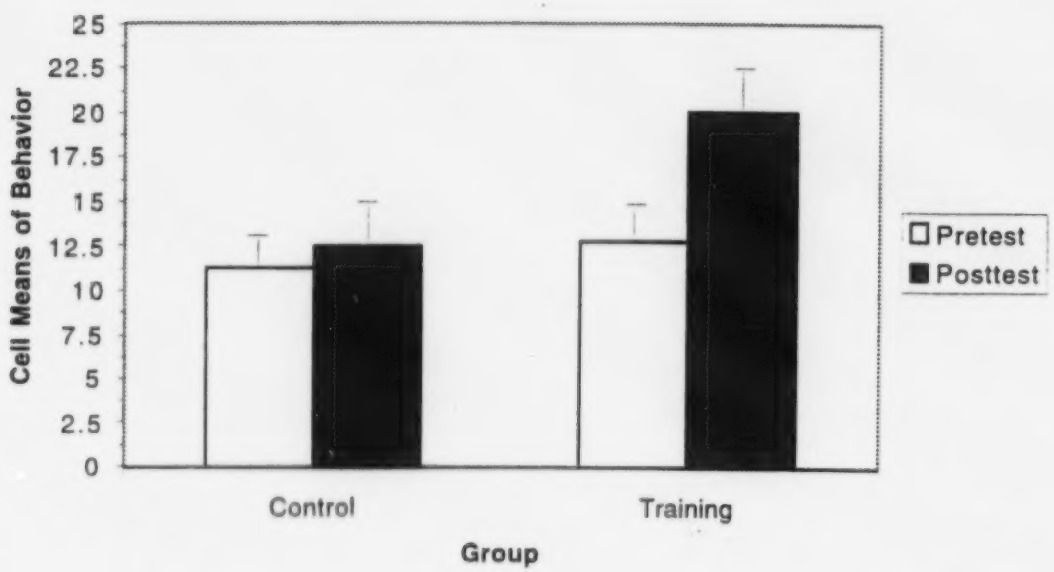
	Levels			
Group	1	2	3	4
Live Presentation (Year 1)				
Protest	44.7	33.9	18.8	2.4
Posttest	0	2.4	61.7	36.0
LP Controls (Year 1)				
Pretest	30.4	39.5	31.3	3.0
Posttest	28.8	42.5	23.8	4.5
Videotaped Presentation (Year 2)				
Pretest	29.8	45.6	23.6	6.3
Posttest	1.2	9.5	57.7	31.7
VP Controls (Year 2)				
Pretest	50.2	31.8	13.8	4.3
Posttest	37.6	35.9	20.5	6.7

Note. Level 1=I know very little about this and need basic information; Level 2 = I need additional assistance in order to apply my knowledge about this to the children in my care; Level 3 = I am independently competent and can apply my knowledge about this to the children in my care; Level 4 = I have mastered this information and I can act as a resource to others.

Figure Captions

Figure 1. Pretest and posttest mean number of observed behaviors (with 95% confidence error bars) for caregivers in the control and training groups.

Figure 1


Cell Means of Behavior
25
22.5
20
17.5
15
12.5
10
7.5
5
2.5
0
Control
Training
Group
Pretest
Posttest

Appendix 1

Content Summary of Each Workshop

1. Children who are at risk for or evidence developmental disabilities
   a. The project's rationale, objectives, and projected outcomes.
   b. Information about physical, psychomotor, communicative, cognitive, and social developmental domains and the special needs of children with disabilities as they relate to each domain.
   c. Information about state and federal legislation that impacts caring for children with developmental disabilities.
   d. Information about the on-site visits.
2. Family relationships and unique issues confronting families containing children who are at-risk for or evidence developmental disabilities
   a. How to identify overall family stress and the effect of stress upon the family system.
   b. How family members typically deal with a child's special condition.
   c. Information about a family systems orientation.
   d. Specific needs parents may have for social and emotional support and ways to provide support through the program structure.
   e. How, when and where to make referrals.
3. Language development and ways to establish a language learning environment that facilitates communication
   a. Information about major parameters of speech and language development.
   b. How to identify conditions which may result in a communication disorder.
   c. Information about the major types of communication disorders.
   d. Methods for facilitating speech and language development.

e. Methods for promoting child-to-child interaction.

4. Cognitive development and play-based strategies for promoting cognitive development
   a. The nature of the relationships between play and cognition.
   b. Information about the value that play has for children with and without developmental disabilities.
   c. Information about the differences between "formal teaching" and "play oriented" preschool experiences.
   d. Methods for enhancing schema development and event representations in children.
   e. Methods for facilitating play interactions between children with and without disabilities.
5. Behavior management and strategies for facilitating affective and social development
   a. How to establish objectives for behavior change procedures.
   b. Information about general antecedents that support appropriate social behavior.
   c. Strategies for including supportive antecedents in child care settings.
   d. Instructional approaches that allow children to acquire skills enabling them to demonstrate positive behavior even in provoking situations.
   e. Information about general consequences that may be used in child care settings to reinforce positive social behaviors and extinguish disruptive responses.
6. Psychomotor development and techniques for facilitating motor skills
   a. Information about motor and movement skill development.
   b. Information about the value that sensory, perceptual-motor, fundamental movement, and fine motor activities have for children with and without disabilities.
   c. Information about the motor and movement difficulties of children with disabilities.
   d. How to simplify movement tasks and specific strategies for enhancing the motor development of all children.
7. Literacy development and strategies for facilitating early reading and writing

a. How children's use of written language reflects their personal discoveries of how language works and how they can make it work for them.

b. Information about the role of the child care provider as one of enabling language and literacy development.

c. Ways to encourage children with disabilities to view themselves as competent users of spoken and written language.

d. Strategies for shared storybook reading and will understand the significance of these experiences for children's use of language in the learning process.

8. Health care and nutritional needs of children with special needs

a. Common nutritional concerns and ways to help children who are under- and overweight.

b. Information about conditions or medical care regimens that affect food preparation and the way children eat.

c. Information about proper positioning for feeding.

d. Special health conditions that occur in children with disabilities.

e. General guidelines for dispensing medication.

Appendix 2

Observation of Caregiver Behavior

Caregiver _____ Rater _____ Date _____ Time _____

	Minutes													
	1	3	5	7	9	11	13	15	17	19	21	23	T
COMMUNICATION														
Models -Repetitions														
Models -Repetitions														
Expansions/Recasts/Expatiations														
Self-talk (verbalizes what they are doing)														
Parallel talk (topic is what the child is doing)														
Sings or plays music with children														
Requests/Questions														
Explains														
Promotes Child-Child Interaction														
Subtotal														
COGNITION/PLAY														
Promotes Autosymbolic Schemes														
Promotes Combinatorial Symbolic Games														
Promotes Socio-drammatic (pretend) play														
Enables the learning of concepts														
Subtotal														
SOCIAL/EMOTIONAL														
Smiles at child														
Encourages child (You can do it)														
Provides physical, loving contact														
Gets formal group games going														
Promotes self-help and social responsibility														
Helps child delay gratification														
Subtotal														

	Minutes													
	1	3	5	7	9	11	13	15	17	19	21	23	T
PHYSICAL														
Promotes stability skills														
Promotes locomotor skills														
Promotes manipulation skills														
Promotes fine motor skills														
Subtotal														
MANAGING BEHAVIOR														
Proactive														
Uses informative praise statements														
Promotes prosocial behavior														
Teaches rules with consequences														
Provides alternative behaviors														
Subtotal														
Reactive														
Forbids, critices, scolds, threatens, negative demands														
Ignores disruptive behaviors														
Restrains or punishes physically														
Physically isolates a child														
Subtotal														
LITERACY														
Provides books to look at														
Provides writing supplies														
Encourages literacy efforts														
Reads aloud														
Talks about environmental print														
Subtotal														

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